

[Name of the Document] Claims

[Claim 1]

A holding structure of a spectacle lens applied to spectacles of a rimless type, wherein a taper pin is provided projecting on a lens holding member for holding the spectacle lens, a taper hole having a taper of approximately the same size as the taper pin is provided on the spectacle lens, the taper pin is directly press-fitted into the taper hole, and by the press-contact between an inner circumferential surface of the taper hole and an outer circumferential surface of the taper pin, the spectacle lens is held.

[Claim 2]

The spectacle lens holding structure according to claim 1, wherein the taper hole is bored in a thickness direction of the lens, and the taper pin is press-fitted therein in the thickness direction of the spectacle lens.

[Claim 3]

The spectacle lens holding structure according to either of the claim 1 or claim 2, wherein irregularity means is provided on at least either of an outer circumferential surface of the taper pin or an inner circumferential surface of the taper hole, so as to increase an engagement force in a slip-off direction of the taper pin when both surfaces are brought into press-contact with each other.

[Claim 4]

The spectacle lens holding structure according to claim 3, wherein the irregularity means is a mat finish surface or a satin finish surface provided on the outer circumferential surface of the taper pin.

[Claim 5]

The spectacle lens holding structure according to claim 3, wherein the irregularity means are grooves provided on the outer circumferential surface of the taper pin along the circumferential direction.

[Claim 6]

The spectacle lens holding structure according to any one of the claims 1 to 5, wherein the size of the taper is set in a range of $1/25$ to $1/100$.

[Claim 7]

The spectacle lens holding structure according to any one of the claims 1 to 6, wherein the taper pin has a mark fixed thereon to specify a predetermined press-fitting amount into the taper hole of the spectacle lens.

[Claim 8]

The spectacle lens holding structure according to any

one of the claims 1 to 7, wherein a rotation preventive means is provided for the lens holding members and the spectacle lens, the rotation preventive means preventing the relative rotation of the taper pin and the taper hole in a state that the taper pin is press-fitted into the taper hole.

[Claim 9]

The spectacle lens holding structure according to claim 8, wherein as the rotation preventive means, the rotation preventive pin separate from the taper pin is provided projecting on the lens holding member, and a pin insertion hole separate from the taper hole is bored in the spectacle lens, thereby inserting the rotation preventive pin into the pin insertion hole to prevent the relative rotation of the taper pin and the taper hole.

[Claim 10]

The spectacle lens holding structure according to claim 9, wherein the rotation preventive pin and the taper pin are parallelly arranged with a specified distance, and the pin insertion hole and the taper hole are parallelly arranged with a specified distance.

[Claim 11]

The spectacle lens holding structure according to claim 10, wherein the distance between the taper pin and the rotation

preventive pin is set to be 0.5mm or above.

[Claim 12]

The spectacle lens holding structure according to claim 9, wherein the taper pin is press-fitted into the taper hole bored in the lens surface of the spectacle lens, and the rotation preventive pin is inserted into the pin insertion hole bored in the edge surface of the spectacle lens.

[Claim 13]

The spectacle lens holding structure according to any one of the claims 9 to 12, wherein the rotation preventive pin and the pin insertion hole are arranged having a slight space therebetween.

[Claim 14]

The spectacle lens holding structure according to claim 8 having the rotation preventive means in which a recessed groove is formed on the spectacle lens, and a part of the lens holding member is fitted into the recessed groove.

[Claim 15]

The lens holding structure according to any one of the claims 1 to 14, wherein the taper pin is press-fitted into the taper hole in a state that an adhesive is preliminarily injected into the taper hole.

[Claim 16]

A repair method of a holding structure of a spectacle lens according to any one of the claims 1 to 15, which is a method for repairing a loosened relationship between the taper hole and the taper pin and repairing damage/modification of the taper hole, comprising:

injecting a liquid resin into the taper hole from which the taper pin is taken out;

in this state, inserting the taper pin or the taper pin made for repair only halfway into the taper hole to secure a slight space in a diameter direction between the taper hole and the taper pin;

under such a condition, allowing the liquid resin to be cured; and

press-fitting the taper pin thereinto, or after taking out the taper pin made for repair only, press-fitting the taper pin thereinto.

[Claim 17]

Spectacles having the holding structure of the spectacle lens according to any one of the claims 1 to 15 which is used for a fixed part of endpiece of a spectacle frame and the spectacle lens, and a fixed part of a bridge and the spectacle lens.

[Claim 18]

A spectacle frame using the spectacle lens holding structure according to any one of the claims 1 to 15.